



MARSHALL STAR

Marshall Space Flight Center

Oct. 25, 2001

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Mars Odyssey now orbiting red planet

JPL news release

The United States returned to Mars Tuesday as NASA's 2001 Mars Odyssey fired its main engine at 9:26 p.m. CDT and was captured into orbit around the red planet.

At 9:55 p.m. CDT, flight controllers at the Deep Space Network station in Goldstone, Calif., and Canberra, Australia, picked up the first radio signal from the spacecraft as it emerged from behind the

planet Mars.

"Early information indicates everything went great," said Matt Landano, the Odyssey project manager at the Jet Propulsion Laboratory in Pasadena. "The orbit insertion burn went off just as we planned and we will now begin the three-month long aerobraking phase."

Throughout Tuesday evening and the early morning hours Wednesday, the flight

See Mars Odyssey on page 5



Education Programs Department issues 'challenge' to teachers

by Debra Valine

Each year, Marshall's Education Programs Department sponsors the Earth-to-Orbit Engineering Design Challenge, an outreach program that encourages teachers to work with students to solve specific "challenges."

This year, Earth-to-Orbit has been included as one of several programs in NASA's Student Involvement Program.

"In the past, we have contacted teachers directly asking them to participate in the Earth-to-Orbit Challenge," said Alicia Beam, an education programs specialist in Marshall's Education Programs Department. "This year we get added publicity as part of NASA's Student Involvement Program."

"The challenge this year is to design and build an aerospace structure," said Dawn Mercer, an education liaison employed by Ai Signal Research Inc. in the Education Programs Department. "It's part of the Aerospace Technology Engineering Challenge designed for teams of two to four students in grades 5-8. Students will create a durable, lightweight and reusable thrust structure with materials such as cardboard and craft sticks."

The Earth-to-Orbit Engineering Design Challenge symposium is held at Marshall each year in April.

"We try to get good representation of the schools from

See Challenge on page 4

\$450,000
(goal)

\$400,000

\$350,000

\$300,000

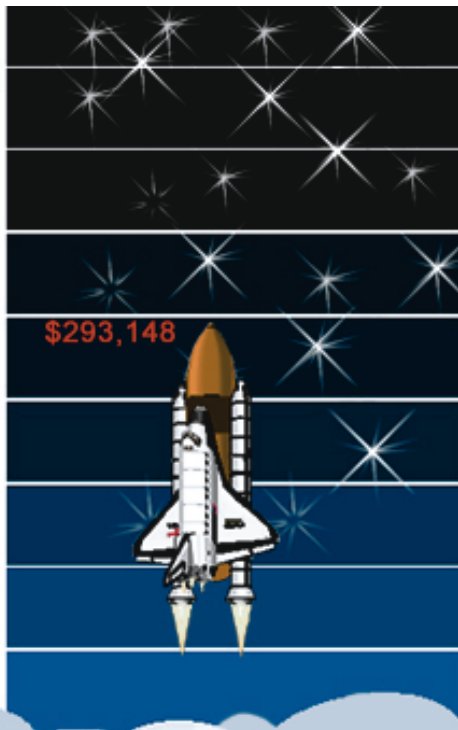
\$293,148

\$250,000

\$200,000

\$150,000

\$100,000



*Pledge results as of Oct. 22.
CFC continues through Nov. 19*

Dan Goldin's Legacy

The news that Dan Goldin was leaving NASA was a surprise to all, including me. I believe Dan Goldin has had a profound, positive impact on America's Space Program.

NASA's longest serving administrator, Dan will be remembered for his commitment to safety and his ability to foresee and implement important changes that made NASA a better, more effective agency.

When Dan took the reins of NASA in 1992, he strongly supported an ambitious Shuttle upgrade program that reduced the statistical chances of a Shuttle launch catastrophe to 1 in 450 from 1 in less than 100. This was accomplished while reducing Shuttle program annual costs by 40 percent. In addition, Dan placed strong emphasis on safety of the public, safety of our workforce and safety of high value assets. NASA's resulting "Safety Initiative" embracing all four elements is a model for industry as well as government agencies. NASA has operated the Shuttle without loss of life throughout his tenure. This is very impressive when one considers the thousands of people involved in Shuttle operations — many in potentially life threatening situations.

Dan came to NASA with a resolve to launch more scientific spacecraft per year while reducing the cost and development time per spacecraft. He accomplished these goals with tremendous success. The number of scientific spacecraft per year launched by NASA went from 1 to 4 and

Director's Corner

the cost dropped by 2/3, with development time dropping by 40 percent. The result is more science for less cost in a shorter period of time. This initiative was called "faster, better, cheaper" by the administrator. Yes there were failures like the two Mars '98 spacecraft, from which we learned, but looking at the record of the 171 spacecraft launches during Goldin's tenure, only 11 were failures. That is an impressive 94 percent record.

The repair of the Hubble Space Telescope and the launch of Chandra were two outstanding successes for space scientists around the world. We have seen the opening up of the Universe in ways we could not imagine. The accomplishments in Space and Earth science are too numerous to begin to count.

Dan was challenged immediately in 1992 to redesign the International Space Station (ISS). He brought in the Russians, which proved extremely valuable due to their contributions in the station itself, but also through the Mir program that taught NASA many lessons prior to the launch of the first elements of the ISS. Today, we all can see the Station passing overhead with a

permanent crew on board. This magnificent laboratory has the potential to do breakthrough science in the years ahead.

Working with Marshall engineers, Dan was the visionary behind the establishment of the Space Launch Initiative — currently NASA's largest development program designed to enable significant reduction in the cost of access to space while improving reliability and safety substantially. Without Dan's commitment, we at Marshall Space Flight Center would not be working with the rest of NASA on this exciting program. Success in developing a 2nd Generation launch vehicle is necessary because cost reductions and safety improvements must be found before we can afford to return humans to the Moon and go on to Mars.

I knew Dan at TRW and believe me it was a huge financial sacrifice for him to take the NASA administrator position. He never hesitated because he saw this as an opportunity to make a big difference in the country's space program, which he has always loved. As he announced his departure from NASA last Wednesday, Dan pointed out that his life while at NASA was not balanced and it is time to do more with his family. Dan truly has sacrificed for NASA and NASA's employees. Dan will be remembered for making a difference.

— Art Stephenson,
Marshall Center Director



File photo

Stephenson, left, welcomes Goldin to the Marshall Center during an event in Morris Auditorium.

Sandra Coleman named NSSTC chief operating officer

by Sherrie Super

Proof that business, technology and education are a winning combination, Sandra C. Coleman has been named chief operating officer at the National Space Science and Technology Center (NSSTC) and selected for government Senior Executive Service.

In this role, she will be responsible for strategic planning and facility operations at the NSSTC. Opened in 2000, the NSSTC unites government, industry and academia to further science and engineering research.

A collaboration that enables scientists,

'Leveraging our resources enables us to bring the best team together, creating a win-win for everyone.'

— Sandra Coleman

engineers and educators to share research and facilities, the NSSTC is a partnership with the Marshall Center, Alabama universities and federal agencies. It focuses on research space science, Earth sciences, information technology, optics and energy technology, propulsion, biotechnology and materials science.

"Education is key to upward mobility," says Coleman, who graduated from college after more than 15 years in the workforce. While employed at the Marshall Center, she earned a bachelor's degree in accounting and a master's degree in engineering — a combination that offers Coleman a unique perspective on the NSSTC's mission of uniting different groups toward common goals.

"From a business standpoint, we must make sure everyone meets his or her objectives," she says. "And from an engineering perspective, we need to look at new ways to enhance the research and

research processes.

Leveraging our resources enables us to bring the best team together, creating a win-win for everyone."

On special assignment to Marshall's Science Directorate, Coleman has spent the last two years managing NSSTC operations during its critical start-up period. In this role, she led development of the NSSTC's business plan, long-range strategic plan and plans to purchase, renovate and move into the center's core facility at 320 Sparkman Drive. At full capacity, the NSSTC will top 200,000 square-feet (18,580 square-meters) and house approximately 550 people.

Her appointment to chief operating officer at the NSSTC is in conjunction with her promotion to the level of Senior Executive Service at the Marshall Center. The Senior Executive Service is the personnel system that covers most of the top managerial, supervisory and policy positions in the executive branch of the federal government.

Coleman joined NASA in 1965, working in Marshall's Saturn program office, supporting the effort that launched Americans to the Moon. In 1969, she became a member of the Space Shuttle Task Team and served in three of the four main project offices — External Tank Project, Solid Rocket Booster Project and Reusable Solid Rocket Motor Project (RSRM).

In the Shuttle Projects Office, she served as business manager, assistant project manager and deputy project manager of the RSRM office. In this role, Coleman became the first woman from Marshall to monitor and verify flight-readiness for a Space Shuttle launch from



Coleman

the Main Firing Room "hot seat." In 1997, she was appointed deputy chief financial officer for resources at the Marshall Center.

Formerly Sandra Cooley, Coleman earned her bachelor's degree in accounting from the University of Alabama in Huntsville and her master's degree in industrial engineering from the University of Alabama in Tuscaloosa — a degree that resulted from Coleman being one of the first women selected for Marshall's highly competitive full-time graduate study program.

She has received numerous awards, including NASA's Outstanding Leadership Medal, Exceptional Service Medal and the Silver Snoopy, awarded by astronauts to recognize outstanding contributions to human space flight missions. A resident of Arab, Ala., she and her late husband of 34 years, Loyd Coleman, are the parents of one married daughter, Christy, and two grandchildren, Emily and Hannah.

The writer, employed by ASRI, supports the Media Relations Department.

Challenge

Continued from page 1

across the country,” Beam said. “Each teacher who comes to Marshall for the symposium brings two students. The symposium gives the teachers and students the opportunity to share what they have learned in trying to solve the challenge, and discuss their projects with Marshall’s experts.

Students gain firsthand knowledge of some of the challenges facing NASA’s aerospace engineers by designing, building, testing and redesigning their own models.

The challenge allows students to discover and understand forces and the transfer of energy involved with a simple physical structure; gain insight into engineering design processes by designing, making and testing a simple spacecraft launch system; and they gain an understanding of NASA spacecraft launch systems.

“Any teacher can pull this information off the NSIP Web site at: <http://education.nasa.gov/nsip> or the Earth to Orbit Web site at: <http://eto.nasa.gov>,” Mercer said. “They can do this anytime and do the projects in their classrooms.”

For more information about the program, visit the Web or call Mercer at 544-1726. More information about NSIP is available by calling 1-800-848-8429.

The writer, employed by ASRI, is the Marshall Star editor.



Marshall engineer Gene Beam, center, of the Space Transportation Directorate discusses space thrust structure at the last symposium.

Dr. Ron J. Litchford named AIAA associate fellow

Dr. Ron J. Litchford of Marshall’s Advanced Space Transportation Program has been awarded the membership status of associate fellow in the American Institute of Aeronautics and Astronautics (AIAA).



Litchford

Associate fellows may be nominated by any AIAA member in good standing and be approved by the membership committee. Nominees must be AIAA senior members and have at least 12 years of professional experience.

Litchford brings more than 14 years of continuous professional research experience to bear on the challenges associated with advanced space transportation systems. This includes two years as a graduate research assistant at the University of Tennessee under the sponsorship of the NASA Graduate Student Researcher Program; five years as a research engineer with the UT-Calspan Center for Space Transportation and Applied Research, a NASA Center for the Commercial Development of Space; five years as project manager for ERC Inc., an established aerospace engineering and research service company; and two years as a research scientist within the Space Transportation Directorate at Marshall, initially with the Propulsion Research Center and currently with the Advanced Propulsion Research Project Office of the Advanced Space Transportation Program.

He obtained his doctorate from the Department of Aerospace and Mechanical Engineering at the University of Tennessee - Knoxville and subsequently qualified as a registered professional engineer.

Group thanks military policewoman for courtesy

A group of Marshall employees and its contractors would like to thank a very special MP for starting-off our day with an uplifting smile and a warm hello for everyone she sees. If you come into the facility through Gate 9 in the morning, you can’t miss her because her smile positively glows and it really warms you and cheers you up. What a wonderful start to our workday after waiting in line to get into the facility.

Letter to the Editor

SSgt. Tracey Watkins is courteous, neat, professional and helpful if you have questions. She goes beyond the call of duty. One morning she helped someone stalled in line get his car going, get into the proper lane, and out of the way. If she hadn’t helped him, the traffic would have been backed-up more than it was.

Some people are just gifted with positive attitudes, and she is one of them. During this time of frustration, stress, and concern for country, SSgt. Watkins is especially appreciated. Please thank her for a job well done from everyone who comes in contact with her.

— *A group of employees
in Bldg. 4200*

'Light Emitting Diode' named best paper

Marshall SBIR technology featured at STAIF Conference

by Tom Knight

A technical paper highlighting ongoing Marshall Small Business Innovation Research (SBIR) efforts with Wisconsin-based Quantum Devices has been singled out by the awards committee of the Space Technology and Applications International Forum (STAIF).

"NASA Light-Emitting Diode Applications — from Deep Space to Deep Sea" has been selected as the "most outstanding paper on space exploration technology" presented at the annual STAIF conference earlier this year in Albuquerque, N.M.

The focus of the paper is the medical impact of breakthrough LEDs, or light-emitting diodes, originally developed for commercial plant growth research in space, now being used to treat patients here on Earth.

The initial SBIR project centered on a cancer treatment technique called Photodynamic Therapy (PDT). In PDT, a probe consisting of 144 tiny, pinhead-sized LEDs is used to release long wavelengths of light to activate light-sensitive, tumor-treating drugs that are injected intravenously. The LEDs destroy cancerous cells, leaving surrounding tissue virtually untouched.

Doctors are examining how this special LED lighting technology can be used for treating hard-to-heal wounds, such as diabetic skin ulcers, serious burns and severe oral sores caused by radiation and chemotherapy. In addition to their civilian wound-healing medical applications, LEDs have far-reaching military implications, such as the treatment of problem wounds

in special operations, as well as for speeding deconditioned personnel to full-duty performance.

Key members of the LED team, as well as co-authors of the LED paper presented at STAIF, include Dr. Harry Whelan, principal investigator, the Medical College of Wisconsin in

Milwaukee; Ron Ignatius, president of Quantum Devices Inc., of Barneveld, Wisc.; Helen Stinson of Marshall's Technology Transfer Department; and Vita Cevenini from NASA Headquarters.

Beginning in 1984, the Institute for Space and Nuclear Power Studies has organized and produced the STAIF conference each February, with the commitment of expanding and extending the knowledge to conquer the challenges of space.

With more than 800 attendees from private industry, academia and government agencies, STAIF offers five conferences in one, including conferences on Thermophysics in Microgravity, Innovative Transportation Systems for the Exploration of the Solar System and Beyond, Commercial/Civil Next-Generation Space Transportation, Space Radiation and Environmental Effects, and the Symposium of Space

Nuclear Power and Propulsion.

Each year, Marshall's SBIR Program provides an opportunity at STAIF for its SBIR companies to showcase their latest research and technology.

Plans for participation in STAIF 2002 are now under way.

The writer, employed by Cortez III, works in the Technology Transfer Department.



Whelan observes the light-emitting diode.

Mars Odyssey

Continued from page 1

team analyzed the information they received from Odyssey. This will help them evaluate the health and status of the spacecraft and determine the precise orbit geometry.

Tuesday's firing of the main engine slowed the spacecraft's speed and allowed it to be captured by Mars' gravity into an egg-shaped elliptical orbit around the planet. In the weeks and months ahead, the spacecraft will repeatedly brush against the top of the atmosphere in a process called

aerobraking. By using atmospheric drag on the spacecraft, flight controllers will reduce the long, highly elliptical orbit into a shorter, 2-hour circular orbit of approximately 400 kilometers (about 250 miles) altitude for the mission's science data collection.

The aerobraking phase is scheduled to begin Friday.

JPL manages the 2001 Mars Odyssey mission for NASA's Office of Space Science, Washington, D.C. Principal investigators at Arizona State University in Tempe, the University of Arizona in

Tucson, and Johnson's Space Center, Houston, Texas, operate the science instruments. Lockheed Martin Astronautics, Denver, Colo., is the prime contractor for the project, and developed and built the orbiter. Mission operations are conducted jointly from Lockheed Martin and from JPL, a division of the California Institute of Technology in Pasadena. NASA's Langley Research Center in Hampton, Va., will provide aerobraking support to JPL's navigation team during mission operations.

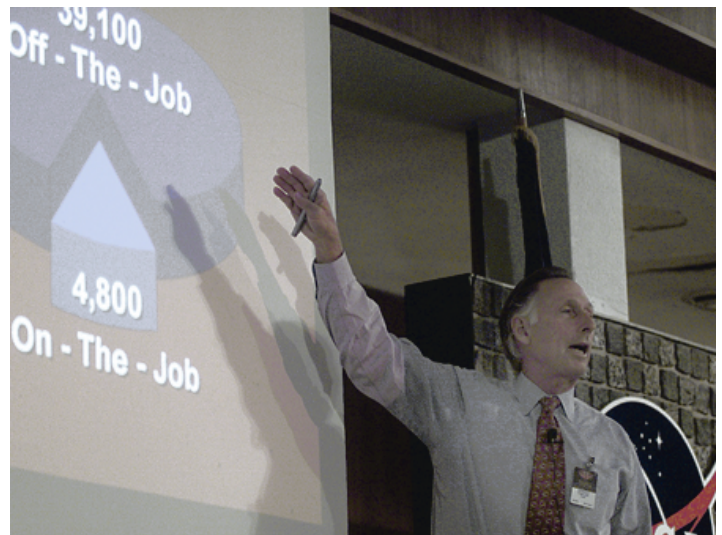
Marshall observes Safety Day Oct. 17



Debbie Bowerman cheers on the Center Operations Directorate's Juggernauts.



Dan Mellen cheers on the Engineering Directorate's ED All-Stars in the final round of the Safety Bowl.



Photos by Emmett Given, NASA/Marshall Space Flight Center

Guest speaker Don Theune from The Topf Organization compares accidents on and off the job during the Safety Day Program Oct. 17.



Tenina Bili, Bruce Askins and Freda Lowery put their heads together to answer a question.



For the second year, the ED All-Stars captured the title in the Safety Bowl. From left are Johnny Maroney, Linda Brewster, Tenina Bili, Engineering Directorate Director Bill Kilpatrick, Freda Lowery, Bruce Askins and Beth Cook.



Amanda Goodson, director of Marshall's Safety and Mission Assurance Office, welcomes employees to the Safety Day program.



Reuse it Rita — Helen Eddleman — and other safety mascots draw for Safety Day door prizes.



Juggernauts Sean Dineen, left, Greg Smith, center, and Ken McGarry listen intently to questions posed during the Safety Bowl.



Marilyn Lewis gets an autograph from visiting astronaut Barbara Morgan.

'Spot The Mascot' Contest begins Nov. 13 — Can you answer these questions?

- **Q: What does VPP stand for?**
A: Voluntary Protection Program
- **Q: What government agency implements VPP?**
A: OSHA
- **Q: Who has the power to stop an unsafe act at Marshall?**
A: Any civil servant or contractor employee
- **Q: How often are Marshall facilities inspected for safe working conditions?**
A: At least once a month
- **Q: Who is the chief safety officer at Marshall?**
A: Art Stephenson
- **Q: What does SHE stand for?**
A: Safety, Health and Environmental
- **Q: What is the Marshall Safety Policy?**
A: Marshall will strive to prevent human injury and occupational illnesses and ensure safety of all operations and products.
- **Q: What percentage of mishaps can be prevented?**
A: 100 percent
- **Q: Who is responsible for safety at Marshall?**
A: Each employee
- **Q: What does a red danger barricade tape mean?**
A: A major hazardous situation exists that presents a danger of death or serious injury and must not be crossed.
- **Q: What does OSHA stand for?**
A: Occupational Safety and Health Administration
- **Q: When should you use stairway handrails?**
A: Always
- **Q: What causes the most lost time injuries at Marshall?**
A: Slips, trips and falls
- **Q: Who is your building manager?**
A: Answer depends on the building
- **Q: What is the primary way to report a safety concern?**
A: SCRS
- **Q: How do you report a facility problem?**
A: Call 544-HELP Option 4, facility work order desk at 544-3919, or report it to your building manager.
- **Q: What is the Marshall Safety and Health Goal?**
A: "Be No. 1 in Safety Within NASA"
- **Q: What is the Marshall health policy?**
A: To promote and maintain the physical and mental well-being of its employees.
- **Q: What is the Marshall environmental policy?**
A: Marshall will strive to protect, preserve and enhance the quality of the environment while conducting their primary mission activities.
- **Be able to describe the proper lifting technique.**



NASA File Photo

The Saturn program was the first major project for the Marshall Center.

First Saturn rocket flew 40 years ago this week

from Marshall's History Office

Oct. 27, 1961, 40 years ago this week, marked a major milestone in the history of the Marshall Center.

It was the first launch of a Saturn rocket, a Saturn I, developed by Marshall Center engineers.

The Saturn I and its follow-on the Saturn IB were stepping-stones to the larger Saturn V that carried the first humans to the Moon in 1969.

The first Saturn vehicle flew a flawless 215-mile ballistic trajectory from Cape Canaveral, Fla. The 162-foot tall rocket weighed 925,000

pounds and employed a dummy second stage.

The mission was primarily for research and development purposes. It verified the structural rigidity of the Saturn airframe and design goals of vehicle control and reliability.

The launch was the first major milestone in a series of 10 Saturn I launches between October 1961 and July 1965.

The success belonged to Dr. Wernher von Braun and his team at the Marshall Center. Von Braun called the launch a "momentous occasion for the entire free world."

Expedition 2 crew visits Marshall Tuesday

Expedition 2 flight engineers James S. Voss and Susan J. Helms will visit Marshall Tuesday. Employees are invited to Morris Auditorium at 10 a.m. for mission highlights and a question-and-answer session.

The Expedition 2 crew launched March 8 aboard STS-102 Discovery. As members of the second crew to live on the International Space Station, Voss and Helms served aboard the Space Station for 163 days and returned to Earth with the STS-105 crew on Aug. 22.

During the mission, Voss conducted spacewalks in both U.S. and Russian space suits, and was the first person to operate the Space Station Robotic Manipulator System (SSRMS), Canadarm2. Helms used the SSRMS to take the joint airlock from the Shuttle and berth it to the Space Station. The Joint Airlock was manufactured at the Marshall Center by the Huntsville division of the Boeing Co.

Other highlights of the mission included unloading the Marshall-managed Leonardo Multi-Purpose Logistics Module, internal and external maintenance tasks, medical and science experiments, a Soyuz capsule flyaround, and five visiting spacecraft.



Voss



Helms



Photo by Emmett Given, NASA/Marshall Space Flight Center

Putting on a show

As part of the Team Redstone/Marshall Center observance of Hispanic Heritage Month, the Ballet Concierto de Puerto Rico performed a mixed repertory including "Portal del Yunque — Gateway to El Yunque" in the Bob Jones Auditorium at Redstone Arsenal's Sparkman Center Monday.

VPP ... where do we place our priorities now?

by Lesley Guerin

The Marshall Center is in the midst of re-evaluating its project priorities, just as many of us are doing in our personal and work lives. While Marshall confronts the issues of how to best use its resources to accomplish organizational goals, the recent attack on America and the ensuing war on terrorism have prompted us to examine similar issues on a personal level. From both standpoints, one inevitable question arises: "Is shooting for the Voluntary Protection Program (VPP) Star still important enough to us that we want to devote our resources to accomplishing that goal?"

As a community, the Marshall Center struggles to cope with the reality that we currently do not have more than enough people to do the work we want to do. With little prospect of major increases in the size of our workforce, we strive to make the best possible use of the people we do have, and to allow them to maintain a healthy balance between the demands of their personal and professional lives.

The success of our VPP initiative is predicated upon the part-time efforts of volunteers and appointees whose regular duties and responsibilities remain unchanged. It also demands an "up front" investment from every Marshall community member, to verify and assure that their contributions to the Safety, Health, Environmental (SHE) Program not only meet all regulatory requirements, but surpass the national standard for excellence and innovation in worker protection programs.

As individuals, we have long struggled to cope with the many competing demands for our time and attention, resisting the stress responses created by that situation. While the pressures of recent current events call into question our personal values and priorities, they have also introduced new stresses and fresh obstacles into our personal and professional lives. Why would we now choose to maintain our organizational and personal

commitment to qualifying for a VPP Star? Consider the following:

- Marshall places its highest value on the people who are the Marshall community — that will not change.
- The SHE Program is our program for worker protection, with or without the VPP effort.
- Each Marshall community member shares responsibility for shaping the evolution of our SHE Program, so that it effectively identifies and controls hazards in our changing workplace.
- Not one of us wants to see or be responsible for another person being harmed on the job.
- Research indicates that thorough hazard analysis and planning, followed by implementation of hazard controls tailored to the individual work process or project, consistently result in time and cost savings accompanied by gains in product and service quality.
- The Voluntary Protection Program is for organizations capable of not only meeting all applicable OSHA requirements, but of creating innovative strategies for excellence in people protection, as well — no one is better qualified to achieve this than we are.
- It's a matter of community pride to demonstrate that Marshall can meet the unending challenge of developing people- and environment-friendly work processes capable of satisfying our customers with consistently high quality levels.
- Acceptance of the VPP Star is a commitment to stay on the leading edge of worker protection technology, and to serve as a national model — Marshall belongs in that role.
- The best service we can offer our country may be to assure the optimal use of Marshall "people resources" to achieve NASA's national and global missions.
- We need every member of our community to be healthy, safe and able to devote their full abilities to performing Marshall missions.
- Is protection of our own workers a worthwhile and patriotic cause?
- What do you think?

The Marshall community will continue its efforts to "Shoot for the Star." "The goal we are striving for is the safety of each person on the Marshall team, and that includes both civil servants and contractors," said Axel Roth, Marshall associate director. "The VPP Star Certification is something that affirms this to our families and customers."

The writer, employed by Hernandez Engineering Inc., works in Marshall's Safety Office.



Make Halloween fun, safe by following safety rules

from the National Safety Council

Halloween is a cherished tradition, but the excitement of the night can cause children to forget to be careful. There is no real “trick” to making Halloween a real treat for the entire family. The major dangers are not from witches or spirits, but rather from falls and pedestrian/car crashes. Many communities officially designate a “Beggars’ Night” and assign specific hours for trick-or-treat activities.

Both children and adults need to think about safety on this annual day of make-believe.

Motorists

The National Safety Council urges motorists to be especially alert on Halloween.

- Watch for children darting out from between parked cars.
- Watch for children walking on roadways, medians and curbs.
- Enter and exit driveways and alleys carefully.
- At twilight and later in the evening, watch for children in dark clothing.

Parents

Before children start out on their “trick or treat” rounds, parents should:

- Make sure that an adult or an older responsible youth will be supervising the outing for children under age 12.
- Plan and discuss the route trick-or-treaters intend to follow. Know the names of older children’s companions.
- Instruct your children to travel only in familiar areas and along an established route.
- Teach your children to stop only at houses or apartment buildings that are well-lit and never to enter a stranger’s home.
- Establish a return time.
- Tell your youngsters not to eat any treat until they return home.
- Review all appropriate trick-or-treat safety precautions, including pedestrian/traffic safety rules.
- Pin a slip of paper with the child’s name, address and phone number inside a pocket in case the youngster gets separated from the group.

Costume design

- Only fire-retardant materials should be used for costumes.
- Costumes should be loose so warm clothes can be worn underneath.
- Costumes should not be so long that they are a tripping hazard. Falls are the leading cause of unintentional injuries on Halloween.
- If children are allowed out after dark, outfits should be made with light colored materials.

- Strips of retroreflective tape should be used to make children visible.

Face design

- Masks can obstruct a child’s vision. Use facial make-up instead.
- When buying special Halloween makeup, check for packages containing ingredients that are labeled “Made with U.S. Approved Color Additives,” “Laboratory Tested,” Meets Federal Standards for Cosmetics,” or “Non-Toxic.” Follow manufacturer’s instruction for application.
- If masks are worn, they should have nose and mouth openings and large eye holes.

Accessories

- Knives, swords and other accessories should be made from cardboard or flexible materials. Do not allow children to carry sharp objects.
- Bags or sacks carried by youngsters should be light-colored or trimmed with retroreflective tape if children are allowed out after dark.
- Carrying flashlights will help children see better and be seen more clearly.

On the way

Children should understand and follow these rules:

- Do not enter homes or apartments without adult supervision.
- Walk, do not run, from house to house. Do not cross yards and lawns where unseen objects or the uneven terrain can present tripping hazards.
- Walk on sidewalks, not in the street.
- Walk on the left side of the road, facing traffic if there are no sidewalks.

Treats

To ensure a safe trick-or-treat outing, parents are urged to:

- Give children an early meal before going out.
- Insist that treats be brought home for inspection before anything is eaten.
- Wash fruit and slice into small pieces.
- When in doubt, throw it out.

***Daylight Savings Time
ends Sunday morning.
Set clocks back one hour.***

Center Announcements

Great Paper Airplane Contest

The American Institute of Aeronautics and Astronautics (AIAA) will hold its 8th Annual Great Paper Airplane Contest at 3:30 p.m. Nov. 9 at the University of Alabama in Huntsville, University Center Exhibit Hall. The event is free and open to all ages. The contest categories include aerobatics, time-of-flight, distance, accuracy and artistic. An awards ceremony will be at 5:15 p.m. For more information, contact Steve Noneman at 544-2048 or send an e-mail to: steven.noneman@msfc.nasa.gov

NASA/High School Senior Day

Marshall Center employees and on-site contractors will be admitted free to the Nov. 17 NASA/High School Day at Alabama A&M University upon presentation of their badge. The Alabama A&M University football team will play the University of Arkansas-Pine Bluff at 1:30 p.m. at the Louis Crews Stadium on the campus. A limited number of tickets for family members may be picked up from the Government and Community Relations Department, Bldg. 4200, room 828. The event is in conjunction with the NASA Exchange.

Upcoming Classes

Resume building briefings

The NASA STARS Process and Employee Resume Building briefings will be from 9:30-11:30 a.m. Oct. 30 in Bldg. 4200, room G-13C. These briefings will familiarize NASA employees with the new NASA STARS business process, on-line resume builder, and assist employees in creating Web-based "whole person" resumes that best represents their skills and competencies. Each session is limited to the first 25 participants. For more information, call LaVerta McGlathery at 544-7560.

Scheduling fundamentals class

The second in a series of 10 classes planned to help strengthen Marshall's workforce skills and knowledge — Scheduling Fundamentals — will be Oct. 31. Each class in the series will be held for four hours. Enrollment is via AdminSTAR. For more information, call Steve Patterson at 544-6260 or Janie Moyers at 544-7552.

Clubs and Meetings

Instrumentation Division meets

The Measuring Branch, Telemetry Branch and Radio Frequency Branch meet the first Tuesday of each month at 11 a.m. at the Redstone Golf Club Coffee Shop. For more information, call Tom Escue at (256) 232-1549.

Rocket City Day

James (Gene) Thomas, Challenger Space Shuttle launch director, will speak at Rise and Shine Rocket City Day at 9:30 a.m. Oct. 28 at Whitesburg Baptist Church on Whitesburg Drive in Huntsville. Thomas will share his personal struggle through those days following the Challenger disaster and hope for the days ahead of us all following the Sept. 11 terrorist attacks on America. Meet Thomas, Alex McCool, manager of Marshall's Shuttle Special Projects Office and Dr. Jimmy Jackson, pastor of Whitesburg Baptist Church, during a special breakfast reception at 8:30 a.m. If you plan to attend the reception, please contact Rev. Carlton Berry at 881-0952 or fax him at 880-5304.

NASA publishes fifth volume of 'Exploring the Unknown'

NASA has just published "Exploring the Cosmos," the fifth volume of "Exploring the Unknown," an ongoing series of reference books essential for anyone interested in the history and development of the U.S. civil space program.

Selected documents of interest to those involved in both space history and space policy are grouped into three thematic chapters with an introductory essay for each subject. Chapter one is devoted to the origins and early organization of space science; chapter two covers NASA's planetary exploration efforts; and the third chapter details space-based astronomy and astrophysics.

The book is for sale for \$70 (domestic postpaid) or \$87.50 (non-U.S.) from the U.S. Superintendent of Documents and from the NASA Information Center.

Details on ordering the volume are available at: <http://history.nasa.gov/what.html>

Thank you

Thank You is one of those wonderful phrases people use to express a special gratitude. But there's often a lot more to it than those two words can say. When it comes from the heart, from deep inside, "Thank You" means so much.

Words cannot express my deep appreciation for everything that all of you kindly did during my husband's time in the hospital and after his passing. Thank you so much for all the prayers, donated leave, dinner brought by the hospital, phone calls, cards and friendly visits to lift my spirits.

From the bottom of my heart and Chad's, I say, "Thank You and God Bless You."

— Lisa Love Greatouse, PS/01

Employee Ads

Miscellaneous

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Vehicles

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\$13,500. 351-1754

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- ★ Moving boxes needed. 971-1414

Free

- ★ Several hundred brick, general shale, color "Rosemont. 722-9274

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